

S/601/62/000/016/022/029
E193/E383

Diffusion of iron

a sharp decrease in the atomic mobility and a decrease in the activation energy for diffusion. The ratio of the activation energy in the α and γ phases has been found to be 1.4 - 1.7, which is in agreement with published data. 3) The calculated values of the pre-exponential factors approach unity for the γ -range and are of the order of 10^{-5} to 10^{-4} cm for the α -range. The latter figure indicates the four-atom ring mechanism of diffusion of Fe in the α -range of the Fe-Hf alloys. There are 3 figures and 5 tables.

SUBMITTED: January 19, 1962

Card 2/2

S/601/62/000/016/025/029
E193/E583

AUTHORS: Gertsriken, S.D. (Deceased), Yatsenko, T.K. and
Slastnikova, L.F.

TITLE: Diffusion of nickel in nickel-base alloys

SOURCE: Akademiya nauk Ukrayinskoyi RSR. Instytut
metalofyzyky. Sbornik nauchnykh rabot. no. 16.
Kiyev, 1962. Voprosy fiziki metallov i
metallovedeniya. 168 - 177

TEXT: The radioactive-tracer technique was used in this
investigation concerned with the effect of the constitution and
impurity level on the diffusion of Ni in refractory, Ni-base
alloys. Two experimental alloys were used: 1) a single-phase
solid solution Ni-Cr-W-Mo-Co alloy, prepared from pure metals and
vacuum-melted, or melted in air and prepared from technical-grade
materials; 2) a heterogeneous Ni-Cr-W-Mo-Ti-Al alloy, also
either vacuum-melted and prepared from pure metals, or melted in
air and made from technical-grade metals contaminated with B.
The diffusion-annealing tests were carried out at 700, 750 and
800 °C. Conclusions - A) The coefficient of volume diffusion of
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E193/E383

Diffusion of nickel

nickel in the alloys studied at 700 - 800 °C is not significantly affected by the degree of purity. B) The coefficient of grain-boundary diffusion of Ni in alloys of technical-grade purity is almost twice as low as that for the high-purity materials, demonstrating clearly the effect of impurities on the diffusion permeability of grain boundaries. C) The coefficients of volume and grain-boundary diffusion of Ni in heterogeneous alloys at 750 - 800 °C are also twice as low as those for single-phase (solid solution-type) alloys. D) Contrary to the view held by many workers, the width of the grain boundaries in the single-phase Ni-base alloy has been found to be 5.5×10^{-6} cm. There are 3 figures and 3 tables.

SUBMITTED: January 21, 1962

Card 2/2

L 15654-65 EWT(1)/EWT(m)/T/EEC(b)-2/EWP(b)/EWP(t) Pad ASD-3/AFFTC/
ESD-3/RADC/IJP(c)/ESD(gs)/AFWL/ASD(a)-5/ASD(m)-3/AFETR JD/HW/MLK

ACCESSION NR: AT4046813

S/C000/64/000/000/0038/0043 /

AUTHOR: Larikov, L. N.; Yatsenko, T. K.; Slastnikova, L. F.; Kumok, L. M. *BT/*

TITLE: The effect of crystal lattice type on the mobility of atoms along the grain boundaries *7 8*

SOURCE: AN SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964, 38-43

TOPIC TAGS: crystal lattice, atom mobility, grain boundary, cobalt iron alloy, diffusive coefficient, alloy recrystallization *27 27*

ABSTRACT: The effect of the crystal lattice type on the diffusion parameters along the grain boundary was studied using different methods to determine the diffusion boundary coefficients. The particular interest of this work was the influence of the crystal lattice type on the mobility of cobalt atoms along the grain boundaries of Co-Fe alloys. Cobalt diffusion in alloys with 12.58 wt.% and 25.67 wt.% Fe was studied at 560-725C. Measurements of the volume diffusion coefficient of cobalt in the α and γ phases of the Co-Fe alloy showed that in a body-centered lattice the volume diffusion is significantly faster than in a closely packed face-centered lattice. The diffusion coefficients determined by

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ACCESSION NR: AT4046813

Gertsriken's method had close values in the α and γ -phases. From this data, the temperature dependence of the diffusion coefficients of cobalt along the grain boundaries of Co-Fe was plotted, and parameters were calculated. The methods of Fisher and Levin were used for comparison and the activation energy of the cobalt diffusion was determined. Experimental results confirm that the boundary diffusion coefficients depend less on the crystal lattice type than on the mobility of atoms. The speed of certain weakening processes connected with atom-mobility in the body and along the grain boundary was studied in the cobalt alloys with different crystal lattices. The kinetics of recrystallization and of the contraction of X-ray interference lines was also followed. The differences noted in the properties are explained by the fact that the rate of growth of the recrystallization centers is linked with the atom mobility along the grain boundary, while the speed of the X-ray interference lines contraction is tied to atom mobility in the body. Orig. art. has: 4 figures, 4 formulas and 4 tables.

ASSOCIATION: none

SUBMITTED: 16Jun64

ENCL: 00

SUB CODE: MM

NO REF SOV: 007

OTHER: 003

Card 2/2

SLASTNIKOVA, Z.V.

**Case of acute miliary tuberculosis of the lungs, pericardium,
and meninges. Probl. tuberk., Moskva No.6:70-71 Nov-Dec, 1953.
(CIAM 25:5)**

**1. Of Moscow Municipal Scientific-Research Tuberculosis Institute
(Director -- Prof. V.I. Rynin).**

Slaston, M. I.

✓ Aleksandr Il'ich Cherkas. N. I. Luganskii, N. M. Dmitrieva, and M. I. Slaston. *Farmakol. i Toksikol.* 18, No. 5, 63-4 (1955).—Biography (C.'s 35th year of teaching pharmacology).
Julian P. Smith

3

SLAST'ON, M.I.

Changes in the glycogen content of the myocardium following the simultaneous use of strophanthin and insulin [with summary in English]. Fiziol. zhur. [Ukr.] 4 no.2:266-268 Mr-Apr '58.

(MIRA 11:5)

1. Kiiv's'kiy medichniy institut im. akademika O.O. Bogomol'tsya, kafedra farmakologii.

(GLYCOGEN) (STROPHANTHIN) (INSULIN)

RODIONOV, P.V., prof.; BAZHENOV, S.V., prof.; SLAST'ON, M.I., dotsent
(Kiyev)

"Medicinal plants and their use by the people" by M.A. Nosal',
I.M. Nosal'. Reviewed by P.V. Rodionov, S.V. Bazhenov,
M.I. Slast'on. Vrach. delo no. 3:147-148 Mr '61. (MIRA 14:4)
(BOTANY, MEDICAL) (NOSAL', M.A.) (NOSAL', I.M.)

SLASTUKHIN, N.

Automotive transportation unit endeavors to reduce current
repairs. Avt. transp. 38 no. 12:8-9 D '60. (MIRA 13:12)
(Motor vehicles--Maintenance and repair)

SLASTUNOV, V.G., inzh.

Technical progress and work safety in the mining industry.
Bezop.truda v prom. 1 no.11:13-16 N '57. (MIRA 10:10)
(Mining engineering)

SLASTUNOV, V.G., inzh.

In Czechoslovakian mines. Bezop.truda v prom. 2 no.3:34-36 Mr '58.
(Czechoslovakia--Mining engineering) (MIRA 11:9)

SLASTUNOV, V.G., inzh.

Analysis of mine accidents. Bezop. truda v prom. 2 no.8:11-14
Ag '58. (MIRA 12:7)

(Mine accidents)

SLASTUNOV, V.G., inzh.

Development of equipment and improvement of working conditions in ore
mining. Bezop.truda v prom. 3 no.1:5-7 Ja '59. (MIRA 12:3)
(Mining engineering)

BARON, Lazar' Izrailevich, prof., doktor tekhn.nauk, red.; DOKUCHAYEV, Mikhail Moiseyevich; VASIL'YEV, Georgiy Aleksandrovich; DORONI-CHEVA, Lyudmila Arkad'yevna; SLASTUNOV, V.G., gornyy inzh., retsenzent; ROMADINOV, A.I., gornyy inzh., retsenzent; YAKHONTOV, A.D., otv.red.; SIPIAGINA, Z.A., red.izd-va; KOROVENKOVA, Z.A., tekhn.red.

[Blasting operations in ore mining; a handbook] Vzryvnye raboty v gornorudnoi promyshlennosti; spravocnoe posobie. Pod red. L.I. Barona. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 181 p. (MIRA 13:3)
(Mining engineering)

SLASTUNOV, V.G., inzh.

The mining system is an important factor in ensuring labor
safety in mines. Bezop.truda v prom. 4 no.2:10-13
F '60. (MIRA 13:5)

(Mining engineering)

BRICHKIN, Aleksandr Vasil'yevich; NIKIFOROV, Ivan Mikhaylovich;
SKALKIN, B.P., dots., retsenzent; SLASTUNOV, V.G., gornyy
inzh., retsenzent; KUZNETSOV, I.P., dots., kand. tekhn.
nauk, retsenzent; YARTSEV, V.A., dots., kand. tekhn. nauk,
retsenzent; KULIKOV, V.P., assistant, retsenzent; SINITSIN,
I.A., assistant, retsenzent; USOV, V.I., assistant, retsen-
zent; BUBOK, K.G., otv. red.; PARTSEVSKIY, V.N., red.izd-va;
SABITOV, A., tekhn. red.

[Safety measures in mines] Tekhnika bezopasnosti na rudnikakh.
Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961.
440 p. (MIRA 15:2)

1. Severo-Kavkazskiy gornometallurgicheskiy institut (for
Skalkin, Slastunov). 2. Zaveduyushchiy kafedroy tekhniki
bezopasnosti i rudnichnoy ventilyatsii Sverdlovskogo gornogo
instituta im. V.V.Vakhrusheva (for Kuznetsov). 3. Kafedra tekhniki
bezopasnosti i rudnichnoy ventilyatsii Sverdlovskogo gor-
nogo instituta im. V.V.Vakhrusheva (for Yartsev, Kulikov,
Sinitsin, Usov).
(Mining engineering--Safety measures)

SLASTUNOV, V.G., gornyy inzh.

Ways of increasing safety and preventing traumatism in mines.
Gor. zhur. no.3:65-70 Mr '61. (MIRA 14:3)

1. Gosgortekhnadzor RSFSR, Moskva.
(Mining engineering — Safety measures)
(Mine accidents)

IZRAITEL', S.A., otv. red.; MOISEYEV, S.L., otv. red.; SKURAT, V.K.,
otv. red.; SLASTUNOV, V.G., otv. red.; ZAYTSEV, A.P., red.;
POLESIN, Ya.L., red.; SKURAT, V.K., red.; SLASTUNOV, V.G., red.;
SOBOLEV, G.G., red.; FECKTISTOV, A.T., red.; MIROSHNICHENKO,
V.D., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Unified safety rules for mining metalliferous, non-metallic, and
placer deposits by the underground method]Edinye pravila bez-
opasnosti pri razrabotke rudnykh, nerudnykh i rossypnykh mesto-
rozhdenii podzemnym sposobom. Moskva, Gosgortekhzdat, 1962. 253 p.
(MIRA 15:12)

1. Russia (1917- R.S.F.S.R.)Gosudarstvennyy komitet po nadzoru za
bezopasnym vedeniem rabot v promyshlennosti i gornomu nadzoru.
(Mine safety)

SLASTUNOV, V.G., inzh.

Some changes in the Unified Safety Regulations for Underground Mining of Metal-ore, Nonmetal and Placer Deposits. Bezop. truda v prom. 6 no.12:14-16 D '62. (MIRA 15:12)

1. Gosudarstvennyy komitet pri Sovete Ministrov RSFSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

(Mining engineering--Safety regulations)

PAVLOV, Konstantin Vasil'yevich[deceased]; SLASTUNOV, V.G., gorn.
inzh., retsenzent; BORISOV, S.S., retsenzent; PARTSEVSKIY,
V.N., red.izd-va; MAKSIMOVA, V.V., tekhn. red..

[Safety engineering and mine rescue work in the mining
industry] Tekhnika bezopasnosti i gornospasatel'noe delo
v gornorudnoi promyshlennosti. Moskva, Gosgortekhhizdat,
1963. 335 p. (MIRA 16:5)
(Mine safety)

SLASTUNOV, V.G., inzh.

All-Union conference on iron mining and dressing. Bezop.truda v
prom. 7 no.3:37-39 Mr. '63. (MIRA 16:3)
(Iron mines and mining)

IZRAITEL', S.A., otv. red.; SKURAT, V.K., otv. red.; ZUBAREV, S.N., otv. red.; MOISEYEV, S.L., otv. red.; ASTAF'YEVA, A.V., kand. tekhn. nauk, red.; VAS'KOVSKIY, Ye.L., red.; VISHNEVSKIY, Ye.L., red.; KRIVTSOV, B.S., red.; KOROTKIN, I.N., red.; MITROFANOV, S.I., doktor tekhn. nauk, red.; NORKIN, V.V., kand. tekhn. nauk, red.; NIKITIN, A.A., red.; RUDNEV, A.P., red.; SLASTUNOV, V.G., red.; TKACHEV, F.A., red.; RAUKHVARGER, Ye.L., kand. tekhn. nauk, red.; FEOKTISTOV, A.T.[deceased], red.; ZAYTSEV, A.P., red.

[Safety regulations for the dressing and sintering of ferrous and nonferrous metal ores] Pravila bezopasnosti pri obogashchenii i aglomeratsii rud tsvetnykh i chernykh metallov. Moskva, Nedra, 1964. 106 p. (MIRA 18:4)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyy komitet po nadzoru za bezopasnym vedeniyem v promyshlennosti i gornomu nadzoru.

KOSTIAL, Krista; MALJKOVIC, Tea; SLAT, Blanka; WEBER, O.

Toxicity of some new chelating agents for radiostrontium removal.
Arh. hig. rada 13 no.4:295-298 '62.

1. Institute for Medical Research, incorporating the Institute of
Industrial Hygiene, Zagreb.
(EDATHAMIL) (CHELATING AGENTS) (STRONTIUM ISOTOPES)
(RADIATION PROTECTION)

SIAT, Blanka; KOSTIAL, Krista

The influence of low temperature on acetylcholine and potassium sensitivity of the superior cervical ganglion. Arh. hig. rada 16 no.1:37-41 '65.

1. Institute for Medical Research, Yugoslav Academy of Science and Arts, Zagreb. Submitted April 24, 1965.

SIAT, Zagreb

Acetylcholine metabolism in sympathetic ganglia. Ark. Hig. Radn.
15 no.2:205-218 '64.

1. Institut za medicinska istraživanja i medicinu rada, Zagreb.

SLATAREV, P., inzh.; BAKALOV, K., inzh.

The UPM-28 multispindle boring machine. Mashinostroene 12
no.3:36-37 163.

SLATEV, Iv.

KARALAMBEV, B.

Bulgaria

Academic Degree not given

The Okrug Hospital in Varna (Okrazhna bolnitsa, Varna);
director: Chief physician N. NIKOLAEV.

Sofia, Pediatrics, supplement of Sovremennaya Meditsina;
No 3, 1962, pp 62-64.

"Clinical and Pathologic-Anatomical Case of Inborn
Toxoplasmosis"

Co-author:

SLATEV, Iv. -- the same affiliation as above.

SIAT & V.A. A

4

3

Some experimental results of the inner photoeffect in mixed zinc sulfide-cadmium sulfide-copper crystal phosphors. M. Borisov, St. Kanev, and A. Staneva. *Compt. rend. acad. bulgare sci.* 8, No. 1, 13-16 (1955) (Russian) (German summary).—Some properties of the kinetics of the inner photoeffect in the crystal phosphors ZnS 50% CdS-Cu and CdS-Cu upon excitation by high intensity light were found in the emitted light. In addn, the glow curves of the cond. in mixed ZnS-CdS-Cu crystal phosphors were investigated. It was detd. that in samples of low CdS content, at temps. higher than room temp., glow max. exist which are displaced toward higher temps. when the phosphor remains a longer time in the dark between the excitation and the heating. Upon irradiation with infrared between the excitation and the heating, the heights of the max. decrease, and upon long, continuous irradiation with infrared they disappear completely.

J. M. Widom

PM

TIKHONOVA, Ye., master; ABZALOV, S.; SLATIN, A.

Our best builders. Stroitel' no.9:12 '58.

(MIRA 13:3)

1. Brigadir tresta No.46, Rybinsk (for Abzalov).
(Construction workers)

SLATIN, A. (KRYMSK)

Under the control of the party organization. Okhr. truda i sots.
strakh. 4 no.4:22-24 Mr '61. (MIRA 14:3)
(Krymsk---Bridge construction---Hygienic aspects)

SLAFIN, Ivan Mikhaylovich

[Government procurement of agricultural products in the U.S.S.R.]
Gosudarstvennye zagotovki sel'skokhoziaistvennykh produktov v SSSR.
Moskva, Vysshaya partiinaya shkola pri TSK KPSS, 1956. 46 p.
(Farm produce--Marketing) (MLA 9:12)

YEVDOKIMOV, Yu.A., kand.tekhn.nauk; LOSHAK, I.A., inzh.; SLATIN, V.A., inzh.

Use of nylon sleeve bearings on construction equipment. Mekh.
stroi. 19 no.4:20-22 Ap '62. (MIRA 15:9)
(Nylon) (Bearings) (Construction equipment)

MEL'NIKOV, V.P., inzh.; SLATIN, V.A., inzh.; NOR-AREVYAN, K.L., inzh.;
IPATOV, A.I., inzh.; SHKURO, L.A., inzh.; TYUTYUNNIKOV, B.D.,
inzh.

Let us give high-quality equipment to the reinforced-concrete-
products plants! Transp. stroi. 12 no.3:30-33 Mr '62.
(MIRA 16:11)

SLATTINEANU, R.

Aspects of standardization in the field of siderurgy. p. 3.
STANDARDIZAREA. Bucuresti. Vol. 7, no. 8, Aug. 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956,

SLATINEANU, R.

Congress of the International Organization for Standardization. p. 7,
STANDARDIZAREA. Bucuresti. Vol. 7, no. 8, Aug. 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956.

SLATINEANU, R.: RATIU, M.

Comparative resilience tests with Mesnager and ISO test tubes. P 167

STANDARDIZAREA. Comisiunea de Standardizare. Bucuresti, Rumania
Vol. II, no. 4, Apr. 1959

Monthly List of East European Accessions (EEAI) LC. vol. 8, no. 9, Sept. 1959

Uncl.

L 16085-65 EWT(m)/EPF(n)-2/EWP(j)/EWP(t)/EWP(b) Pu-4 LJP(c) JD/JG/RM

ACCESSION NR: AP4046450

S/0078/64/009/010/2381/2386

AUTHOR: Limar', T. F.; Slatinskaya, I. G.; Sikora, O. P. B

TITLE: Oxalic acid compounds of niobium

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 10, 1964, 2381-2386

TOPIC TAGS: niobium oxalic acid compound, synthesis, oxaloniobic acid, ammonium oxaloniobate, potassium oxaloniobate, sodium oxaloniobate

ABSTRACT: The process of polythermal crystallization of solid phases from solutions of niobium hydroxide and oxalic acid or ammonium, potassium or sodium oxalate was shown applicable for the synthesis of oxaloniobic acid and its alkali salts. The niobium hydroxide was made by reaction of K_2NbF_7 with NH_4OH ; after filtering and washing the niobium hydroxide was dissolved in saturated oxalate solutions at pH 1. Optimum conditions were crystallization with agitation at temperatures from about 70 to 20-22C for 5-7 hours from solutions having an $Nb:C_2O_4^{2+}$ ratio of 1:3 and containing, after concentration, 1.6-1.8

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L 16085-65

ACCESSION NR: AP4046450

mol/l niobium in the case of $\text{H}_2\text{C}_2\text{O}_4$ or $\text{K}_2\text{C}_2\text{O}_4$ and 2 mol/l in the case of $(\text{NH}_4)_2\text{C}_2\text{O}_4$ and $\text{Na}_2\text{C}_2\text{O}_4$. The products formed were $\text{H}_3\text{NbO}(\text{C}_2\text{O}_4)_3 \cdot 7 \cdot 5\text{H}_2\text{O}$ and in the case of sodium, potassium and ammonium, $\text{Me}_3\text{NbO}(\text{C}_2\text{O}_4)_3 \cdot 2\text{H}_2\text{O}$. 5-10% oxalic acid losses were encountered, especially at the higher temperature due to decomposition: $\text{H}_2\text{C}_2\text{O}_4 \longrightarrow \text{CO}_2 + \text{CO} + \text{H}_2\text{O}$. Pentavalent niobium was recovered as Nb_2O_5 from the mother liquor by precipitation with NH_4OH . The oxaloniobic acid and its salts are water-soluble white crystalline products; the salts are insoluble in acetone, alcohol, ether and carbon tetrachloride, and the acid is hydrolysed by alcohol and acetone. The thermograms showed dehydration of the salts at 100C, decomposition of the Na and K salts at 230-260C and of the ammonium salt at 180C. The acid dehydrated at 76 and 121C, the acid decomposed at 175-185C and Nb_2O_5 formed at 228-250.5C. Orig. art. has: 4 tables and 2 figures

ASSOCIATION: None

SUBMITTED: 13Jun63

SUB CODE: GC

ENCL: 00

NO REF SOV: 004

OTHER: 003

Card 2/2

SLATINSKIY, A. N.

Velvet

Setting of the nap in semi-velvets and velvets., Tekst. prom., no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1957, Uncl.
2

SLATINSKIY, A.N.; POLOVNIKOVA, S.A.

Automatic control circuit of the technological processes in
the padding dyer and steaming apparatus. Tekst.prom. 21
no.6:67-68 Je '61. (MIRA 15:2)

(Textile machinery)
(Automatic control)

SLATINSKIY, A.N.

Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science; Machine and Instrument Manufacturing, Moscow, Izd-vo AN SSSR, 1958. 358 p.

Pchel'in, V.A., and T.A. Shmeleva (MGU imeni Lomonosova; NII mekhovoy promyshlennosti - Moscow State University imeni Lomonosov; Scientific Research Institute of the Fur Industry). Radiometric Determination of the Fur Density of Pelts	203
Shvyryay, S.S., A.N. Slatinskiy, and K.D. Pismannik (Tsentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti - Central Scientific Research Institute of the Cotton Industry). Use of Radioactive Isotopes in the Textile Industry	206
Nekhayevskiy, Ye.A. (VNII Gornak). Use of Radioactive Isotopes in the Control of the Weight of Paper Sheets	212
Kardash, Ye.G. (Tsentral'nyy nauchno-issledovatel'skaya laboratoriya Gosgortekhnadzora - Central Scientific Research Laboratory of "Gosgortekhnadzor"). Scintillation Pipe Thickness Gauge	217
Iordan, G.G., and T.G. Neyman (Nauchno-issledovatel'skiy institut teploenergeticheskogo priborostroyeniya - Scientific Research Institute for Heat-Power Instrument Making). Measurement of Solution Concentrations With Beta Radiation	223
Yermolev, Ye.I. Use of Backscattering of Beta Radiation in the Control of the Thickness of Coatings	227
Yur'ev, M.Y. Apparatus for the Measurement of the Thickness of Coatings	234

SOV/170-59-6-11/20

24(4)

AUTHOR: Slatinskiy, A.N.

TITLE: Determination of Utilization Coefficient of Radioactive Radiation for Flat Type Ionization Chambers

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 6, pp 80-83 (USSR)

ABSTRACT: The value of utilization coefficient of radiation is characterized by the magnitude of solid angle under which the input opening of the ionization chamber is seen from the middle of a radioactive source. This value depends on the distance between the collecting electrodes in the chamber M and on the distance from the input opening to the surface of the source N, the relation being expressed by the formula:

$$\alpha = 0.25 \left[1 + \frac{1}{\pi} \operatorname{arctg} \frac{M (M^2 - 8N^2)}{N (5M^2 - 4N^2)} \right]$$

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for the case of $M > N$, and

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. Determination of Utilization Coefficient of Radioactive Radiation for Flat Type Ionization Chambers

$$\alpha = \frac{0.25}{\pi} \operatorname{arctg} \frac{M (M^2 - 8N^2)}{N (5M^2 - 4N^2)}$$

for the case of $M < N$. If there is a blind between the port of the ionization chamber and the surface of the radiation source, separated from the latter by δ , then the value of the coefficient of utilization can be expressed by the formula:

$$\alpha_1 = \frac{0.25}{\pi} \operatorname{arctg} \frac{l (N + \delta)}{N \delta - l^2}$$

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where l is the separation of the blind from its extreme left position.

Determination of Utilization Coefficient of Radioactive Radiation for Flat Type
Ionization Chambers

SOV/170-59-6-11/20

There are 2 schematic diagrams and 1 Soviet reference.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy
promyshlennosti (Central Scientific Research Institute for Cotton
Industry), Moscow.

Card 3/3

SLATINSKIY, A.N.

Use of radioisotopes in light industry. Atom.energ. 9 no.3:
229-231 S 60. (MIRA 13:8)
(Radiosotopes--Industrial applications)

23759

S/170/61/004/006/015/015
B129/B212

21.5200

AUTHOR: Slatinskiy, A. N.

TITLE: Determination of the mean free path of beta particles in
the working space of an ionization chamber

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 6, 1961, 135-137

TEXT: The length of path is different for each beta-particle in the working space of the ionization chamber, since it is a function of the angle at which the particle will incide into the chamber. For the calculation of the projection of radioactive indicators it is necessary to use the mean free path of the beta-particles. For this purpose the cross section diagram of the ionization chamber as shown in Fig. 1. is considered. N denotes the distance of the ionization chamber from the surface of the radioactive source. The length of the collector electrodes is L and the distance between them is M . If the radioactive point source is located at a distance x from the end then the angle at which the beta-particles incide upon the working space will be $\alpha_0 = \delta + \gamma + \eta + \epsilon$ (see Fig. 1).

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S/170/61/004/006/015/015
B129/B212

Determination of the mean free...

Writing $\tan \psi = x/(1+N)$, $\cos \psi = 1/a$, (1) $\tan \eta = (M-x)/(1+N)$, $\cos \eta = 1/b$. (2) will result in $y = xl/(1+N)$, (3), $c = x - y = x(1-l/(1+N))$ (4), $d = (M-x)(1-l/(1+N))$ (5), $z = (M-x)l/(1+N)$ (6). The mean free path of the beta-particles is determined by the arithmetic mean of the boundary value

$$L_y = a/2, L_{\psi} = (a+1)/2, L_{\eta} = (b+1)/2, L_z = b/2. \quad (7)$$

The general mean free path of the particles is given by

$$L_{cp} = L_y/M + L_{\psi}c/M + L_{\eta}d/M + L_z/M \quad (7a)$$

and considering (1)-(7) we obtain

$$L_{cp} = 0,5l \left[\frac{x}{M} \frac{1}{\cos \left(\arctg \frac{x}{1+N} \right)} + \left(1 - \frac{x}{M} \right) \times \right. \\ \left. \times \frac{1}{\cos \left(\arctg \frac{M-x}{1+N} \right)} + 1 - \frac{l}{1+N} \right]. \quad (8)$$

Card 2/4

23107

S/170/61/004/006/015/015
B129/B212

Determination of the mean free...

An analysis of equation (8) shows that the mean free path of the particles will change from a maximum at $x=0$ to a minimum at $x=0.5 M$ and also from the minimum to the initial maximum at $x=M$ if the radioactive point source will move on the base from one chamber electrode to another. In order to obtain the mean free path for the beta particles with respect to the total length of the radioactive source it is necessary to integrate equation (8) in the interval $x=0$ to $x=0.5 M$. The mean free path of the beta-particles is determined separately for the longitudinal and transverse direction of the chamber, if the chamber is rectangular, and the general mean free path is found as arithmetic mean. There is 1 figure. X

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (Central Scientific Research Institute of the Cotton Industry)

SUBMITTED: July 23, 1961

Card 3/4

L 44718-66 EWT(1)/EWT(m) AT

ACC NR: AR6009594

SOURCE CODE: UR/0272/65/000/010/0171/0171

AUTHOR: Slatinskiy, A. N.

TITLE: Determining the optimum radioactivity of a radiation source for pickups with an ionization chamber ✓

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 10.32.1300

REF SOURCE: Nauchno-issled. tr. Tsentr. n.-i. in-t khlopchatobum. prom-sti. M., 1962 (1964), 315-322

TOPIC TAGS: radioactive source, radioactivity, ionization chamber

ABSTRACT: The maximum permissible reduction in source intensity depends on the effect which fluctuations in radiation have on the readings of the instrument. The time constant of the input circuit of the instrument is increased to keep the effect of fluctuations below the permissible value in the case of a source of low radioactivity. But a criterion is needed in selecting the time constant which would satisfy the predetermined requirements for the instrument with the minimum possible intensity of the radiation source. Fluctuations in the input circuit of the instrument should be suppressed to keep them sufficiently small in succeeding stages. 2 illustrations, bibliography of 4 titles. [Translation of abstract]

SUB CODE: 18

Cord 1/1 LB

UDC: 389:539.074.2:539.1.03

KRZHESINSKIY, A.I.; SLATINSKIY, V.V.

[Brief manual on mechanical drawing] Kratkoe rukovodstvo po
tekhnicheskomu risovaniiu. Izd. 2-oe, ispr. Moskva, Gos. nauchno-
tekhn. izd-vo mashinostroit lit-ry, 1956. 47 p., diagrams.
(Mechanical drawing) (MLRA 9:9)

SLATINSKY, A.

The Ostrava railroad and car couplings, p. 20.
(ZELEZNICAR, Vol. 6, no. 1, Jan. 1956, Praha, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

KOBIELOWA, Zofia; KOBIELA, Jan; GROCHOWSKI, Jan; SLATNIK, Jozef

The group system of haptoglobins (Hp) in some childhood diseases. Pol.
tyg. lek. 17 no.39:1497-1499 24 S '62.

1. Z I Kliniki Chorob Dzieci AM w Krakowie, kierownik: prof. dr T.Giza,
z Zakladu Medycyny Sadowej AM w Krakowie, kierownik: prof. dr nauk med.
Jan Olbrycht, z II Kliniki Chirurgicznej AM w Krakowie, kierownik:
prof. dr Jan Oszacki i z Sanatorium Rehabilitacyjnego dla Dzieci w
Radziszowie, kierownik: dr Jozef Slatnik.
(HAPTOGLOBINS) (PEDIATRICS) (BLOOD GROUPS)

L 25771-66 EWT(m)/T

ACC NR: AP6016381

SOURCE CODE: UR/0048/65/029/010/1935/1937

AUTHOR: Guseva, V. V.; Lebedev, A. M.; Slavatskiy, S. A.; Sokolovskiy, V. V.

ORG: none

TITLE: Interaction between nucleons and complex nuclei in the presence of high energies

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1935-1937

TOPIC TAGS: nucleon interaction, compound nucleus, nucleon, pion, Wilson cloud chamber, calorimeter, angular distribution, lithium compound

ABSTRACT: The principal features of the interaction between nucleons and complex nuclei in the presence of accelerating energies are satisfactorily described by the model of the cascade-reproduction of nucleons and pions inside the nucleus. In the presence of energies of hundreds of BeV, however, new, interesting features of this interaction may be expected, since the beam of particles generated in the nucleus is strongly collimated. In this connection, the authors discuss the results of the first attempts to quantitatively examine the cascade process in the presence of high energies, made by BARASHENKOV and YELISEYEV (OIAN Preprint, R-1678), GUSEVA, et al. (Proc. Intern. Conf. Cosmic Rays, Jaipur, Vol. 5, 349, 1963), and LEBEDEV et al. (Zh. Eksperim. i Teor. Fiz.,

Card 1/2

L 25771-66

ACC NR: AP6016381

46, 6,2151 (1964)), and compare these theoretical findings with the experimental findings of GUSEVA et al. (Izv. AN SSSR, Ser. Fiz., 26, 549 1962), obtained with field instruments in the Pamir Mts. In the Pamir experiments a thin copper target ($5 \text{ g}\cdot\text{cm}^{-2}$) was placed in a Wilson chamber and the primary energy from the target was measured by means of an ionization calorimeter. 14 showers with mean energies of 160 bev were thus observed. In another series of experiments 81 showers from a target consisting of lithium hydride (LiH) above a Wilson chamber were observed. It is established that the theoretically calculated parameter of the anisotropy of angular distribution as a function of the Lorentz factor γ , of the symmetric dispersion of secondary particles is in agreement with the experimental findings if it is calculated on the basis of the cascade model of the interaction, but it diverges from these findings if it is calculated on the basis of

the hydrodynamic mode. The authors thank G. B. Zhdanov and M. I. Tret'yakova for providing the materials for the photoemulsion beams which were received and developed in laboratories of various countries. Orig. art. has: 3 figures.
[JPRS]

SUB CODE: 20 / SUEN DATE: none / ORIG REF: 005 / OTH REF: 002

Card 2/2 *CL*

SLATVINSKAYA, Ye.A.

Facies and coal measures of the Ashlarik series in the Karaganda Basin.
Trudy Lab.geol.ugl. no.2:210-222 '54. (MLRA 8:7)
(Karaganda Basin--Geology, Stratigraphic)
(Karaganda Basin--Coal geology)

ISHINA, T.A.; KOPERINA, V.V.; RENGARTEN, N.V.; SLATVINSKAYA, Ye.A.

Using the facies analytical method in geological prospecting
operations. Trudy Lab.geol.ugl. no.5:153-160 '56. (MLRA 9:8)

1. Laboratoriya geologii uglya AN SSSR.
(Coal geology) (Prospecting)

20-1-47/58

AUTHOR: Slatvinskaya, Ye. A.

TITLE: The Types of Cross Section and the Conditions of Formation of Coal-Bearing Carboniferous Sediments of Central **Kazakhstan** (Tipy razrezov i usloviya obrazovaniya uglenosnykh otlozneniy karbona Tsentral'nogo Kazakhstana).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 167-170 (USSR)

ABSTRACT: For a long time there were no special investigations of the lithological composition of the facies and the formation of these layers. The laboratory (see below: Association) proved the occurrence of two groups of facies (references 1-7); a) "parallic" and b) terrestrial-continental. To group a) belong sediments which are connected with marine conditions of formation. They correspond to the Ashlyarikskiy-type: Group b) constitutes deposits which are in connection with inland lakes, delta-, river-bed- and flood-regions and which correspond to the Karagandinskoye-Dolinskiy-type. The facies near the bank contain clastic rocks from aleurolites and argillites to finely grained sandstones with a rich marine fauna: pelecypods, brachiopods, gastropods, crinoids, ostracoda and others. Characteristic is oblique-wavy, uniformly directed oblique or horizontal structure of layers of small series. It is often disturbed by mud-eaters or by lands-

Card 1/4

The Types of Cross Section and the Conditions of Formation of
Coal-Bearing Carboniferous Sediments of Central Kazakhstan

20-1-47/58

inskaya suite. The Karagandinsko-Dolinskiy type of sedimentation replaces the Ashlyarik-type at the boundary of the Namurian and the Middle Carboniferous. Its facial composition is much more unstable. Medium- and coarse-grained sandstones occur which are much worse sorted. The completely absent marine fauna is replaced by rich plant fossils and scarce remains of a fresh-water fauna (pelecypods, ostracods, phyllopods). Among these continental deposits the following facies are predominant: facies of river beds, of the flooded region, the lakes swamps, deltas and the dry planes. The coal is of better quality, capable of coking and mostly poor in ashes. In comparison with the beds of the Ashlyarik-type they are of a simpler structure here and contain less empty rock. The coal parcels are thicker, 0,8 m and more. A. A. Lyuber (reference 3) here separates 2 types of coal formation: a) Karagandinskiy and b) Dolinskiy. After drier climatic conditions had set in, in places gray and multicolored sand-aleurolite sediments corresponding to the facies of the "dry planes" developed. They probably formed in small lakes and rivers of the semidesert region. Besides the activation of explosive terrestrial gas-ash-volcanos in many places manifests itself, whereby the first occurrence of the above-mentioned gray and red formations

Card 3/4

SLATVINSKAYA, Yelena Alekseyevna; Prinimali uchastiye: MONAKHOVA, I.P.;
ISHINA, T.A.; PETRENKO, A.A., doktor geol.-miner.nauk, otv.red.;
DELMATOV, P.S., red.izd-va; SOROKINA, V.A., tekhn.red.

[Conditions governing the formation of the coal-bearing
Carboniferous in central Kazakhstan; Ak-Kuduk and Ashlarik series]
Usloviia obrazovaniia uglenosnogo karbona TSentral'nogo Kazakhstana;
akludukskaia i ashlarikskaia svity. Moskva, Izd-vo Akad.nauk SSSR,
1962. 126 p. 16 plates. (Akademiia nauk SSSR. Laboratoriia
geologii uglia, Trudy, no.14). (MIRA 15:4)
(Kazakhstan--Coal geology)

VOLKOVA, I.B.; NALIVKIN, D.V.; SLATVINSKAYA, Ye.A.; BOGOMAZOV, V.M.;
 GAVRILOVA, O.I.; GUREVICH, A.B.; MUDROV, A.M.; NIKOL'SKIY, V.M.;
 OSHURKOVA, M.V.; PETRENKO, A.A.; POGREBITSKIY, Ye.O.; RITENBERG,
 M.I.; BOCHKOVSKIY, F.A.; KIM, N.G.; LUSHCHIKHIN, G.M.; LYUBER,
 A.A.; MAKEDONTSOV, A.V.; SENDERZON, E.M.; SINITSYN, V.M.; SHORIN,
 V.P.; BELYANKIN, L.F.; VAL'TS, I.E.; VLASOV, V.M.; ISHINA, T.A.;
 KONIVETS, V.I.; MARKOVICH, Ye.M.; MOKRINSKIY, V.V.; PROSVIRYAKOVA,
 Z.P.; RADCHENKO, O.A.; SEMERIKOV, A.A.; FADDEYEVA, Z.I.; BUTOVA,
 Ye.P.; VERBITSKAYA, Z.I.; DZENS-LITOVSKAYA, O.A.; DUBAR', G.P.;
 IVANOV, N.V.; KARPOV, N.F.; KOLESNIKOV, Ch.M.; NEFED'YEV, L.P.;
 POPOV, G.G.; SHTEMPEL', B.M.; KIRYUKOV, V.V.; LAVROV, V.V.;
 SAL'NIKOV, B.A.; MONAKHOVA, L.P. [deceased]; MURATOV, M.V.;
 GORSKIY, I.I., glav. red.; GUSEV, A.I., red.; MOLCHANOV, I.I.,
 red.; TYZHNOV, A.V., red.; SHABAROV, N.V., red.; YAVORSKIY, V.I.,
 red.; REYKHERT, L.A., red. izd-va; ZAMARAYEVA, R.A., tekhn. red

[Atlas of maps of coal deposits of the U.S.S.R.] Atlas kart ugle-
 nakopleniya na territorii SSSR. Glav. red. I.I. Gorski. Zam.
 glav. red. V.V. Mokrinski. Chleny red. kollegii: F.A. Bochkovski
 i dr. Moskva, Izd-vo Akad. nauk SSSR, 1962. 17 p.

(MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglya. 2. Chlen-
 korrespondent Akademii nauk SSSR (for Muratov).
 (Coal geology--Maps)

SIAUER, Oskar MUDr

Intrathoracic use of dornokinase in hemothorax.
Vnitr. lek., Brno 1 no.2:145-147 Feb 55.

1. Z plicního a tbc. odd. OUNZ v Bohumíně, přednosta MUDr MVDr Boh.
Novák Ostrava X., Stáskova č. 14

(STREPTODORNASE AND STREPTOKINASE, ther. use
hemothorax, intrathoracic admin.)

(HEMOTHORAX, therapy
streptodornase & streptokinase, intrathoracic admin.)

SIAUKA, Vlastimil, MUDr.

Occupational hygiene in research with exposed radioactive substances.
Pracovní lek. 10 no.2:176-178 May 58.

1. Vojenská lékařská akademie Jana Evangelisty Purkyně, Hradec Králové.
(ISOTOPES,
hazards in laboratory research using isotopes (Cz))
(RADIATION PROTECTION,
in laboratories using radioisotopes in research (Cz))

SLAUKA, V.

Potentiating effects of simultaneously administered radioactive sodium nonohydrogen and chromic orthophosphate labeled with P32 in surviving rats. Cesk.fysiol. 9 no.3:264-265 My '60.

1. VLVDU, Hradec Kralove.
(PHOSPHATES pharmacol)
(PHOSPHORUS radioactive)
(RADIATION INJURY exper)

~~172~~ SLAUS, 140

17
 Investigations of the mechanism of the $Cr^{46}d,Cr^{46}$ re-
 action. Ivo Slava (Inst. "Rudjer Boskovic", Zagreb,
 Yugoslavia). *Nuclear Phys.* 10, 457-57 (1966).—The above
 reaction was investigated at deuteron energies of 3.20 to
 4.4 m.e.v. The measurements reveal the importance of the
 direct interaction process. The small angle part of the
 angular distribution could be fit with Butler's (C.A. 46,
 6062d) $l_n = 1$ curves. Important deviations from the
 simple Butler theory were found which seemed to be caused
 by the interference between stripping and compd. nucleus
 formation. A pronounced secondary max. evolved around
 χ 65°, and possible explanations are discussed. N. E. P.

463c (2)

463d

3

pm

PAIC, V.; PAIC, M.; PRELEC, K.; CERINEO, M.; ILAKOVIC, K.; SLAUS, I.; TOMAS, P;
VALKOVIC, V.; LJOLJE, K.; SIPS, V.

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NIVINSKAS, G.; SLAUTA, V.

In Lithuania. Zashch.rast.ot vred. i bol. 4 no.1:9-12 Ja-F
'59. (MIRA 12:2)

1. Zamestitel' ministra sel'skogo khoz'vaystva, Litva (for
Nivinskas).
(Lithuania--Plants, Protection of)

MINKEVICIUS, A., glav. red.; KRIAUCIUNAS, J., red.; MASTAUSKIS, St.,
red.; SLAUTA, V., red.; STRUKCINSKAS, M., red.; ZAJANCKAUSKAS, P.,
red.; ZIEVYTE, Z., red.; SADAUSKAITE, A., red.; SARKA, S., tekhn.
red.

[Practices in controlling plant diseases, pests, and weeds] Prak-
tiskos kovos priemonės prieš augalų ligas, kenkejus ir piktžoles;
straipsnių rinkinys. Vilnius, Valstybinė politinės ir mokslinės
literatūros leidykla, 1962. 165 p. (MIRA 16:3)

1. Lietuvos TSR Mokslų Akademija, Vilniaus Botanikos institutas.
(Lithuania--Plant, Protection of)

SLAUTA, V.

Guarantee for successful work. Zashch. rast. ot vred. i bol.
8 no.4:12 Ap '63. (MIRA 16:10)

1. Nachal'nik Litovskoy respublikanskoy atantsii zashchity
rasteniy. (Lithuania—Plants, Protection of)

KOMISSAROVA, R.A.; SLAUTSITAYS, I.P. [Slaucitais, I.]

Age of the Asha series according to paleomagnetic data. Trudy
VNIGRI no.186:365-369 '61. (MIRA 15:3)
(Geological time)

SLAUTSITAYS, I.P.[Slaucitajs, I.]

Paleomagnetic studies of Upper Permian and Triassic sediments
in the southern Ural Mountain and Caspian Sea regions. Trudy
VNIGRI no.204:118-144 '63. (MIRA 16:6)

(Ural Mountain region—Geology, Stratigraphic)
(Caspian Sea region—Geology, Stratigraphic)

SLAVA, M. K.

"Kul'turno-istoricheskiye svyazi pribaltiyskikh narodov po dannym odezhdy."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

SLAVA, Zdenek

Corticoid ointments in dermatological therapy. II. Experiences
with a hydrocortisone ointment Spofa. Cesk.derm.34 no.6:386-388
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1. II. dermatologicka klinika v Praze, prednosta prof.dr. Karel
Hubschmann.

(HYDROCORTISONE ther)
(DERMATOLOGY ther)

GARLINSKAYA, Yevgeniya Il'inichna; SLAVCHENKO, N.A., inzh.;
BOGOMAZOV, S.F., nauchn. red.; SHUMILOVA, Ye.M., red.

"Handbook on electric cables and wires] Spravochnik po
elektricheskim kabeliam i provodam. Moskva, Vysshaia
shkola, 1964. 200 p. (MIRA 17:6)

CA

25

Azo dyes from 2,8-aminonaphthal and some of its derivatives. 1. Azo dyes from 2,8-aminonaphthal. V. A. Potkaln and N. M. Slavychevskaya (Leningrad Technol. Inst., Leningrad). *Zhurn. Obshchei Khim.* (J. Gen. Chem.) 21, 897 (1951); cf. C. I. 42, 6968c. — Addn. of 12.25 g. powd. 2-amino-8-sulfonaphthalene as the Na salt to 35 g. KOH at 240–50° and fusion for 7–9 min. at 270–80° yields after usual treatment 40% 2,8-aminonaphthol, m. 155–6° (from H₂O) (I). 1 (1.50 g.) in 100 ml. AcOH treated at pH 1 over 15 min. at 10–15° with 100 ml. 0.1 N PhN₂Cl; no ppt. formed in 1 hr., but after 24 hrs. 0.1 g. dye ppt. was formed identical with that isolated from the AcOH soln. by addn. with H₂O and neutralization with 10% NaOH; this, after filtration with 10% NaOH, soln. in 10% alc. NaOH, and acidification, m. 176° (from 50% EtOH); the dye forms in 30% yield and its structure is 1-benzeneazo-2,8-aminonaphthol (II) (insol. in 10% aq. NaOH, gives red-brown soln. in alc. NaOH and deep blue in concd. H₂SO₄). Reduction of the dye with Zn-AcOH and treatment of the product with phenanthroquinone and NaHSO₄ soln. gave 8-hydroxy-1,2-naphthophenanthraquinone, yellow, m. 300° (from PhCl). The dye could not be diazotized nor did it react with phthalic anhydride on coneing. When I was coupled with PhN₂Cl at pH 1.5 (10% HCl) and the products were treated as above, there was obtained 56% II, while the alkaline filtrate on acidification with 10% AcOH gave 44% 5-benzeneazo-2,8-aminonaphthol, m. 174° (from C₆H₆), (III). When coupling was run at pH 5.5 in NaOAc-10% HCl soln., 73% III was isolated. At pH 11 in 10% NaOH, the coupling led to 81% dye, isolated by acidification with 10% AcOH, which after purification gave 50% pure III, while the insol. fraction, after reprecip., gave a small amount of

5,7-bis(benzeneazo)-2,8-aminonaphthol, m. 232° (from PhCl), (IV). Treatment of III in EtOH with H₂SO₄, then with NaNO₂, gave 4-benzeneazo-1-naphthol, m. 203°. Diazotization of III in HCl and coupling with 1-naphthol after neutralization with NaOAc, gave 1-(4'-naphtholazo)-5-benzeneazo-2,8-aminonaphthol, decomp. 110° (red in 10% NaOH, green in concd. H₂SO₄, red-violet in hot concd. HCl, red-brown in AcOH). Fusion of III with equimolar amount of phthalic anhydride gave 5-benzeneazo-8-hydroxy-2-naphthylphthalamic acid, brown-red, m. 107°. When III was coupled with PhN₂Cl at pH 11 in NaOH (addn. over 2 hrs. at 0–5°, and 4 hrs. stirring) there was formed 71% IV, isolated as the insol. ppt. When III was coupled similarly with 2 moles PhN₂Cl, acidification of the filtrate gave only a trace of III, while 28.5% IV was isolated. Attempted coupling of II with PhN₂Cl in EtOH in the presence of EtONa gave no reaction and II was recovered; the same result was obtained in 50% aq. pyridine. The unusual properties of II are caused by 2 H bonds, utilizing the H atoms of OH and NH, and N atoms of the azo group. Abs. spectrum of II is the same in EtOH or 1% alc. NaOH with a large max. at about 500 mμ. III shows abs. max. at 505 in EtOH, and 520 mμ in EtOH-NaOH; IV gives max. at 530 mμ in EtOH and 540 mμ in EtOH-NaOH. G. M. K.

CA

Azo dyes from 2,8-aminonaphthal and its derivatives.
I. Azo dyes from 2,8-aminonaphthal. V. V. Berekalin
and N. M. Slavychevskaya (Leningrad Inst. Technol., Len-
ingrad). *J. Gen. Chem. U.S.S.R.* 21, 1085-1086 (1951)
(Engl. translation).—See C.A. 45, 8774j. II. Reaction
of sulfonic acids of 2,8-aminonaphthal with diazo com-
pounds. V. V. Berekalin and L. N. Kononova. *Ibid.*
1255-1257. See C.A. 45, 10580j.

... ..

dissertation: "Interaction of Some Five-Membered Nitrogen-Containing Heterocyclic Compounds With Diketene." Cand Chem Sci, Leningrad State Pedagogical Inst, Leningrad, 1953, Referativnyi Zhurnal--Zhiriya, Moscow, No 7, Apr 54.

SC: SUM 284, 26 Nov 1954

✓ Reactions of diketene. II. Reaction of diketene with indole and its oxygen-containing derivatives. V. V. CII
 Perckallu and N. M. Slavachevskaya (A. I. Gertsen Pedagog. Inst., Leningrad). *Zhur. Obshchei Khim.* 24, 2184-8 (1954); cf. *C.A.* 47, 11155c. — Addn. over 1 hr. of 3.36 g. diketene to 4.68 g. indole, 20 ml. C_6H_6 , 20 ml. MePh and 0.5 ml. pyridine at -10° , heating 1 hr. on a steam bath, evapn. and treatment with much 2% NaOH, gave on neutralization of the alk. ext. with dil. HCl and CO_2 43.7% *N*-acetoacetylindole (I), m. 100° . The yield is almost the same when quinoline or Me_2NPh is used as catalyst; with Et_3N the yield is zero, however. Hydrolysis of the product in 2% NaOH gave indole and Me_2CO . Coupling with PhN_2Cl in aq. alc. NaOAc gave 43% *N*-acetoacetylphenylazindole, m. $150-60^\circ$, yellow, which hydrolyzed in 5% NaOH to Na phenylazoacetate, m. 195° , in 91% yield. I refluxed with Ac_2O at $150-70^\circ$ 3 hrs. gave 12.5% *N*-acetoacetyl-3-acetylindole, m. $178-6^\circ$, which hydrolyzed

with 5% NaOH to 3-acetylindole, m. $190-1^\circ$. Treatment of 3.30 g. diketene with 3.56 g. indoxyzcarboxylic acid in CaH_2 in the presence of 3 drops pyridine (45 min. on steam bath in II) gave 37% *N*-acetoacetylindoxy, m. 110° ; without a H atm. the yield is 30%; hydrolysis with 5% HCl gave indigo and Me_2CO . Diketene reacts with phthalimidine in MePh in the presence of pyridine at reflux (1.1 hrs.) yielding 97% *N*-acetoacetylphthalimidine, m. $135-7^\circ$, which hydrolyzed with aq. Na_2CO_3 to phthalimidine and Me_2CO . Diketene and dioxindole similarly gave 28% 2,3-diacetoacetyldioxindole, m. $170-2^\circ$. Isatin and phthalimide as well as oxindole failed to react owing to their relatively high acidity. G. M. Kosolapoff

AUTHORS: Rabinchik, F. Yu., Slavachevskaya, N. M., SOV/79-28-11-21/55
Ioffe, D. V.

TITLE: Mercapto Amines (Merkaptoaminy) I. β -Mercapto Ethyl
Amine and Its N-Substituted Forms (I. β -Merkapto-
etilamin i yego N-zameshchennyye)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11,
pp 2998 - 3004 (USSR)

ABSTRACT: β -mercapto ethyl amine and its derivatives due to
their pharmacological and chemical properties
(Refs 1-5) attract more and more the attention of
scientists. Its synthesis and properties are,
however, insufficiently explained. The experiments
by I.S.Ioffe on the synthesis of β -mercapto ethyl
amine led the authors to two closely related methods,
as they believe: The reaction of ethylenimine with
 H_2S , and the acid cleavage of mercapto thiazoline,
which is directly obtained from ethanol amine.
Unlike Knorr (Ref 10) the synthesis of the 2-mercapto
thiazoline in aqueous medium was carried out in the
presence of an emulsifier (yield:85%). Its acid

Card 1/3

Mercapto Amines. I. β -Mercapto Ethyl Amine and Its
N-Substituted Forms

SOV/79-28-11-21/55

cleavage is obtained by long boiling with concentrated hydrochloric acid. The formed β -mercapto ethyl amine hydrochloride contained 5% bis-(β -amino ethyl)-disulfide. Mercapto ethyl amine is a strong base and easily forms salts (Table 1); it is easily oxidized to the disulfide by atmospheric oxygen in alkaline medium. The taurine is obtained by strong oxidizing agents. The authors found a synthesis that was more convenient than the one described in reference 13 for the N-substituted β -mercapto ethyl amine, in the condensation of the ethylene thio-oxide with amines, which hitherto has not been sufficiently dealt with in references as regards its reaction conditions. The authors succeeded in demonstrating that in this reaction two cases must be distinguished: The reaction of the ethylene thio-oxide with amines of high basicity, and that with those of low basicity. In table 2 the properties of the synthesized N-substituted β -mercapto ethyl amines are mentioned.

Card 2/3

Mercapto Amines. I. β -Mercapto Ethyl Amine and Its
N-Substituted Forms

SOV/79-28-11-21/55

The results obtained show that the β -mercapto ethyl amine is an accessible preparation for the further synthesis of its pharmacological derivatives to be investigated. The synthesis of the amino sulfides was improved proceeding from the β -halogen alkyl amines and sodium disulfide. The properties of the synthesized amine disulfides are given in table 3. There are 3 tables and 19 references, 7 of which are Soviet.

SUBMITTED: September 25, 1957

Card 3/3

21.630.
5.3900

~~5 (3), 17 (10)~~

67748

SOV/74-23-12-23/25

AUTHORS:

Rachinskiy, F. Yu., Mozzhukhin, A. S.,
Slavachevskaya, N. M., Tank, L. I.

TITLE:

Chemical Prophylactics Against Acute Radiation Disease 17

PERIODICAL:

Uspekhi khimii, 1959, Vol 28, Nr 12, pp 1488-1522 (USSR)

ABSTRACT:

With this review, the authors wished to provide an aid to facilitate search of new, efficient protective agents against the deteriorating effect of ionizing radiation. The search of rational ways to protect organism against the action of radiation is based on the study of primary processes connected with the influence of radiation on organism. By numerous investigations (Refs 3, 15 to 29), it has been established that during the first phase of the action of ionizing radiation on organism, energy absorbed by the tissue is manifested by a series of chemical reactions. The deteriorations observed are the consequences of chemical alterations of some macromolecules occurring in the biosubstrate. From these fundamental concepts, modern ideas result on the possible mechanisms to reduce radiosensitivity of animals by means of pharmacological substances administered to organism prior to irradiation. Since the chief biological

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Chemical Prophylactics Against Late Radiation Disease DDV/74-28-12-23/25

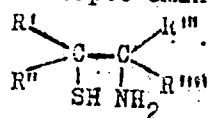
effect of ionizing radiation takes place through products of radiolysis, the protective agents should, first of all, reduce the formation of active radicals and interaction with radiosensitive substances (Refs 3, 11, 30). Facts observed (Refs 3, 11, 31 to 50) lead to the conclusion that substances with a potential protective efficiency against ionizing radiation must necessarily show antioxidative properties. They must take an active part in transfer reactions, form intra-complex compounds with heavy metals, cause anoxia, and reduce exchange processes in the irradiated organism. The biological method is the only reliable one to evaluate protective agents. For being lengthy and tedious, however, investigators are compelled to look for simpler models. Experiments were performed on polymethacrylate (Refs 38, 42), fatty (Refs 51, 62 - Table 1), oxygen-containing (Ref 64), moniodine acetate (Ref 64 - Table 2), and enzyme models. These, presumably, cannot be considered a substitution for experiments to choose efficient protective agents, but, if an appropriate selection of models is carried out, a simplified choice of perspective groups of preparations and classes of chemical compounds could be achieved. It was first observed in 1949 (Refs 70, 71) that

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3774a

Chemical Prophylactics Against Acute Radiation Disease SOV/74-28-12-23/25

Chemical substances can reduce the effect of radiation. It was, however, only after the protective effect of β -mercapto ethyl amine (Ref 72) had been discovered that medical prophylaxis was recognized, and β -mercapto ethyl amine and the corresponding disulfide (cystamine) were experimentally and clinically used (Refs 1 to 5, 7, 9, 30, 38, 40, 63, 66, 68, 72 to 91). Methods of preparation and the protective effects of mercapto amines and their derivatives are described: β -mercapto ethyl amine $H_2NCH_2CH_2SH$ (Refs 30, 38, 63, 65, 68, 73, 75, 78, 92 to 95, 102, 105 to 108). The protective effects of some β -mercapto ethyl amine salts are shown in table 3. The oxidation rates of some amino mercaptans with oxygen in absence and presence of Fe^{2+} are shown on the figure (p 1499). In addition, mercapto amines having the general formula $HS(CH_2)_nNH_2$ ($n \geq 2$) (Table 4); mercapto amines having the general formula



(Table 5); N-substituted derivatives of

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Chemical Prophylactics Against Acute Radiation Disease SOV/74-28-12-23/25

β -mercapto ethyl amine (Table 6); S-substituted derivatives of β -mercapto ethyl amine $R-S-CH_2CH_2NH_2$ (Table 7); N,S-substituted derivatives of β -mercapto ethyl amine (Table 8), and amino disulfides (Refs 3, 68, 95, 98, 167 to 169, 171, 172, 176) are discussed. From the thiocarbamates, the highest protective efficiency was shown by the sodium diethyldithiocarbamate (Table 9). Thiazolidine, thiazole, and thiazoline derivatives were investigated (Table 10). The syntheses and protective efficiencies of isothiuronium compounds (Table 11) and mercapto guanidine (Table 12) as well as of nitriles (Refs 6, 246 to 251 - Table 13), of aryloxy ketones (Refs 252 to 257, 41 - Table 14) as well as of amines and amino acids (Refs 30, 36, 38, 45, 71, 258 to 262 - Tables 15 and 16) are described. Preparations showing the highest protective efficiencies are given in table 17. Practically, however, only amino thiols and isothiuronium compounds (cysteamine, cystamine, and S- β -amino ethyl isothiuronium) have been hitherto used. The principal shortcomings of the efficient preparations is their limited efficiency range (little difference between minimum efficient and minimum toxic doses), and the short term of their

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Chemical Prophylactics Against Acute Radiation Disease ⁶⁷⁷⁴⁸ SOV/74-28-12-23/25

protective efficiency. It has been established that the SH- and NH₂-groups are actively efficient in the protective agents.

Lack or substitution of these groups cause a considerable reduction of the protective effects of the preparations, or these become completely inefficient. There must be certain steric relations between these groups. It was observed (Ref 68) that, in dependence on the mutual position of the SH- and NH₂-groups in the molecule, preparations show either

protective (α -homocysteine, cysteine) or sensitizing (β -homocysteine, isocysteine) properties to ionizing radiation. A study of the relation between the chemical structure and the protective efficiency leads to the conclusion that it will be hardly possible to find any more efficient substances in the classes of chemical compounds hitherto investigated as compared to the substances already known. Since not all substances which are anti-oxidizing agents, show a protective efficiency, the protective agents must evidently have some additional properties. It has not yet been possible to establish the character of these properties, and the degree to

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Chemical Prophylactics Against Acute Radiation Disease SOV/74-28-12-23/25

which the protective efficiency is influenced by them. It can be assumed, however, that one of the most important properties of the protective agents is their capacity to penetrate into the cells, and to disperse between the individual tissues, and, moreover, their capacity to form complex compounds with such heavy metals which may initiate oxidative chain reactions. There are 1 figure, 17 tables, and 269 references, 47 of which are Soviet. ✓

ASSOCIATION: Voyenno-Meditsinskaya akademiya im. S. M. Kirova (Military-medical Academy imeni S. M. Kirov)

Card 6/6

11-11
RACINSKI, F.I. [Rachinskiy, F.Yu.]; MOZJUHIN, A.S. [Mozzhukhin, A.S.];
SLAVACEVSKAYA, N.M. [Slavochevskaya, N.M.]; TANK, L.I.

Chemical agents for the prophylaxis of acute actinic diseases.
Analele chimie 15 no.2:65-106 Ap-Je '60. (EEAI 9:11)
(Radiation)

RACHINSKIY, F. Yu.; SLAVACHEVSKAYA, N.M.; SOVALKOVA, L.K.

N-substituted 1.3.4-tetrahydroquinolines. Zhur.ob.khim. 31
no.8:2751-2758 Ag '61. (MIRA 14:8)
(Quinoline)

L 13370-63

EWP(j)/EPF(g)/EWT(m)/BDS

ASD

Pc-4/Pr-4

RM/WW

ACCESSION NR: AP3003311

S/0191/63/000/007/0043/0051

AUTHORS: Rachinskiy, F. Yu.; Slavachevskaya, N. M.; Potapenko, T. G.; Kremen,
M. Z.; Matveyeva, Ya. N. 68

TITLE: Synthesis and investigation of antioxidative properties of some analogues of ionol(3,5-di-tert-butyl-4-oxitoluene).

SOURCE: Plasticheskiye massy, no. 7, 1963, 48-51.

TOPIC TAGS: butyloxitoluene, antioxidant inhibitor, ethylene polymer, propylene polymer, thermooxidation.

ABSTRACT: A number of derivatives of 3,5-di-tert-butyl-4-oxitoluene have been synthesized and tested as possible antioxidant inhibitors. The antioxidant properties of these compounds were evaluated according to their ability to delay the oxidation of bone fat and by their ability to thermostabilize ethylene and propylene co-polymers. It was established that most of the synthesized derivatives, excluding 3,5-di-tert-butyl-4-oxibenzaldehyde and 3,5-di-tert-butyl-4-oxibenzylal-n-phenylenediamine, are effective inhibitors of the thermooxidation destruction processes of bone fat and ethylene and propylene co-polymer. Their activities in most cases exceed the activities of 3,5-di-tert-butyl-4-oxitoluene.

Card 1/2/

L 41613-65 EWG(j)/EWT(m) GS
ACCESSION NR: AT5008043

S/0000/64/000/000/0170/0178 19

AUTHOR: Mozzhukhin, A. S.; Rachinskiy, F. Yu.; Slavachevskaya, N. M.; Tank, L. I. 19

TITLE: Relation between the chemical structure and radiation-protective properties in a series of aminothiols and certain of their derivatives 19

SOURCE: Patogenez, eksperimental'naya profilaktika i terapiya luchevykh porazheniy (Pathogenesis, experimental prevention, and therapy of radiation injuries); sbornik statey. Moscow, Izd-vo Meditsina, 1964, 170-178

TOPIC TAGS: radiation protection, radiation sickness, aminothiol

ABSTRACT: During the course of a search for new radiation-protection agents considerable numbers of mercaptoamines and mercaptoguanidines and a much smaller number of disulfides of mercaptoamines and thiazolidines were synthesized and studied. The results of tests performed on white mice are presented in five tables. The authors conclude that the functional groups which provide the protective action in the mercaptoamine molecule are the mercapto and amino groups with the optimum distance between functional groups not exceeding 2 to 3 carbon atoms. Similar results were obtained with the aminosulfides. Derivatives of aminothiols, aminodisulfides

Card 1/2

L 41613-65

ACCESSION NR: AT5008043

and mercaptoguanidines are no more effective with respect to radiation protection
than the original compounds. Orig. art. has: 5 tables. 0

ASSOCIATION: none

SUBMITTED: 19Aug64

ENCL: 00

SUB CODE: LS, OC

NO REF SOV: 005

OTHER: 011

Card 2/2 10

ACCESSION NR: AP4027978

S/0205/64/004/002/0266/0269

AUTHOR: Rachinskiy, F. Yu.; Kushakovskiy, M. S.; Matveyev, B. V.
(Deceased); Slavachevskaya, N. M.; Tank, L. I.

TITLE: Radioprotective action of thiazolidines

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 266-269

TOPIC TAGS: thiazolidine, thiazolidine hydrolysis, thiazole ring
substitution, radioprotective action, X-irradiation, lethal dose,
2,2-dimethylthiazolidine, 2-phenylthiazolidine,
2-oxymethylthiazolidine, 2-n-nitrophenylthiazolidine,
2-n-dimethylaminophenylthiazolidine

ABSTRACT: Radioprotective action of 25 thiazolidines with substitu-
tions in the second position of the thiazole ring was investigated in
2000 experimental mice. Most of the thiazolidine preparations were
administered intramuscularly to groups of experimental animals in the
form of neutral aqueous solutions 5-15 min before irradiation, and
some of the preparations were administered intraperitoneally in the
form of an oil solution 1 hr before irradiation. Control and

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ACCESSION NR: AP4027978

experimental animal groups were X-irradiated with single 700-r doses (RUM-3, 180 kv, 15 ma, 34-36 r/min), and all control animals died shortly. Of the 25 preparations tested, ten increase survivability of irradiated animals. 2,2-dimethylthiazolidine and 2-phenylthiazolidine protected more than 50% of the animals from death in their respective groups. But these two preparations are radioprotective only with large doses approaching the toxic level. Other preparations displaying protective action are 2-oxymethylthiazolidine, which is not stable, and salts of 2-n-nitrophenylthiazolidine and of 2-n-dimethylaminophenylthiazolidine, which hydrolyze too fast. Hydrocarbon derivatives are also radioprotective. Preparations which hydrolyze slowly administered 1 hr before irradiation were not found to be more radioprotective than preparations which hydrolyze fast. This study has not determined the effect of second position substitutions in the thiazole ring on radioprotective activity, but the data suggest a possible relationship may be established for some thiazolidine preparations. Orig. art. has: 3 tables.

ASSOCIATION: Voenno-meditsinskaya ordena Lenina akademiya im. S. M. Kirova, Leningrad (Military-Medical "Order of Lenin" Academy.)

2/02

Card

L 41617-65 EWG(j)/EWT(m) GS
ACCESSION NR: AT5008048

S/0000/64/000/000/0233/024727
B11

AUTHOR: Rachinskiy, F. Yu.; Kushakovskiy, M. S.; Matveyev, B. V.; Potapenko, T. G.;
Slavachevskaya, N. M.; Tank, L. I.; Titov, A. V.; Yampol'skaya, L. I.

TITLE: Comparative evaluation of certain models for the initial selection of radiation protection compounds

SOURCE: Patogenez, eksperimental'naya profilaktika i terapiya luchevykh porazheniy (Pathogenesis, experimental prevention, and therapy of radiation injuries); sbornik statey. Moscow, Izd-vo Meditsina, 1964, 233-247

TOPIC TAGS: radiation protection, radiation sickness, aliphatic compound, oxygen compound, methemoglobin

ABSTRACT: Assuming that the antioxidant and reducing properties of radiation protection compounds of bivalent sulfur are related to their ability to decrease the severity of radiation sickness, models using these properties were compared. It was established that not a single model, taken separately, was adequate for a biological method of selecting antiradiation agents; however, the results of tests of

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I. 41617-65

ACCESSION NR: AT5008048

substances on several models can serve as an initial test for the selection of active substances. Aliphatic, oxygen, and methemoglobin models most fully reflect the potential radiation protection activity of substances. Orig. art. has: 8 tables.

ASSOCIATION: none

SUBMITTED: 19Aug64

ENCL: 00

SUB CODE: LS,CC

NO REF SOV: 002

OTHER: 023

Card 2/2 *MEL*

L 43927-65 EWT(m)/EPF(c)/T Pr-4 WE

ACCESSION NR: AT5008624

8/2933/64/007/000/0047/0057

AUTHORS: Rachinskiy, F. Yu.; Bol'shakov, G. F.; Bruk, Yu. A.; Krasen', M. Z.;
Pavlova, L. V.; Potapenko, T. G.; Slavachevskaya, N. M. 24
22
061

TITLE: Synthesis and antioxidant properties of sulfur- and nitrogen-bearing Ionol
derivatives

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya soraorganicheskikh soedineniy,
soderzhashchikhaya v neftyakh i nefteproduktakh, v. 7, 1964, 47-57

TOPIC TAGS: antioxidant, sulfur, nitrogen, thermooxidation/ Ionol

ABSTRACT: The retardation of oxidative degradation of hydrocarbon fuels, polyolefins, fats, and many synthetic and derived products was studied. In the present work the authors have synthesized and studied the antioxidant properties of a number of Ionol structural analogs, including azomethynes, hydrazones, amines, sulfides, and disulfides. The properties and compositions of these products are tabulated in the article. The treatment of Ionol with bromine and the condensation of 3,5-di-tert-butyl-4-oxobenzyl bromide with primary, secondary, and tertiary amines takes place with the formation of intermediate compounds of 2,6-

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L 43927-65

ACCESSION NR: AT5008624

di-tert-butyl-4-methylene quinone. Synthetic nitrogen- and sulfur-bearing structural analogs of Ionol are able to retard oxidation reactions not only during degeneration but during development. This results from a capacity to react with the primary radicals of the oxidized substance and also from a capacity to decompose the peroxide and to bind metallic ions of variable valence. Many of the synthesized substances cause effective retardation of thermooxidation of polyolefins and fats, inhibit radiation-chemical oxidation of fats, and some become effective additives for increasing the thermooxidizing stability of jet fuels. Orig. art. has: 1 figure and 4 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, F^P

NO REF SOV: 008

OTHER: 010

LL
Card 2/2

L 38276-65 EPF(c)/EWP(j)/EWT(m) Pc-l/Pr-l RM

ACCESSION NR: AP5008236

S/0286/65/000/005/0129/0130

AUTHORS: Rachinskiy, F. Yu.; Slavachevskaya, N. M.; Matveyeva, Ye. N.; Kremen', M. Z.; Lazareva, N. P.

TITLE: Method of stabilizing polyolefins. Class 39, No. 151024

25
B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 129-130

TOPIC TAGS: stabilization, olefin, polymer, additive

ABSTRACT: This Author Certificate presents a method for stabilizing polyolefins by introducing into the prepared polymer a stabilizing additive. To obtain a polymer whose properties do not change during 160C heat treatment, 2,6-ditertiary-butyl-4-oxybenzoic acid is used as the stabilizing additive.

ASSOCIATION: none

SUBMITTED: 26Jan62

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 1/1 *mb*